

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

LEAK SURVEYS, INC.,

Plaintiff,

v.

FLIR SYSTEMS, INC.,

Defendant.

Civil Action No. \_\_\_\_\_

JURY TRIAL DEMANDED

**ORIGINAL COMPLAINT**

This is an action for patent infringement in which Plaintiff Leak Surveys, Inc. (“LSI”) makes the following allegations against Defendant FLIR Systems, Inc. (“FLIR”).

**PARTIES**

1. Plaintiff Leak Surveys, Inc. is a Texas corporation, with its principal place of business at 1102 Early Blvd., Early, Brown County, Texas 76803.
2. On information and belief, Defendant FLIR Systems, Inc. is an Oregon corporation with its corporate headquarters and principal place of business at 27700 SW Parkway Ave., Wilsonville, Oregon 97070. FLIR may be served via its registered agent for service of process, National Registered Agents, Inc., 350 N. St. Paul Street, Suite 2900, Dallas, Texas 75201.

**JURISDICTION AND VENUE**

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over FLIR. FLIR has conducted extensive commercial activities and continues to conduct business within the State of Texas. FLIR directly and/or through intermediaries (including other FLIR entities, subsidiaries, distributors, sales agents, partners and others), manufactures, ships, distributes, offers for sale, sells, and/or advertises its products (including, but not limited to, the products and services that are accused of infringement in this lawsuit) in the United States, the State of Texas, and the Northern District of Texas.

5. FLIR (directly and/or through intermediaries, including other FLIR entities, subsidiaries, distributors, sales agents, partners and others) has purposefully and voluntarily placed one or more of its products and services (including, but not limited to, the products and services that are accused of infringement in this lawsuit) into the stream of commerce with the expectation that the products and services will be purchased by customers in Texas, including in the Northern District of Texas. These infringing products and services have been and continue to be purchased by customers in the Northern District of Texas. Accordingly, FLIR has committed the tort of patent infringement within the State of Texas, and, more particularly, within the Northern District of Texas as alleged in more detail below.

6. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b).

#### **THE PATENTS-IN-SUIT**

##### **United States Patent No. 8,193,496 (“the ’496 Patent”)**

7. On June 5, 2012, United States Patent No. 8,193,496 (the “’496 Patent”), entitled “Methods for Performing Inspection and Detecting Chemical Leaks Using an Infrared Camera System,” was duly and legally issued to inventor David W. Furry by the United States Patent and Trademark Office (“USPTO”) after a full and fair examination.

8. LSI is the owner of the entire right, title, and interest in and to the '496 Patent by assignment, and has the exclusive right to sue for infringement and recover damages for all past, present and future infringement, including against Defendant FLIR. The '496 Patent is valid and enforceable. A true and correct copy of the '496 Patent is attached as **Exhibit A**.

9. The '496 Patent is generally directed to methods for visually detecting gas leaks emanating from various components typically found in petrochemical plants, pipelines, utility plants, and/or other industrial settings. The claimed invention discloses the detection of chemical gas leaks by adapting a refrigerated infrared camera system, with specific optical bandpass filters within the infrared absorption band for the chemicals in question, to create infrared images depicting the leak at any given source component. Therefore, gas leaks can be visually identified based on the visual image representing the filtered infrared image provided by the infrared camera system.

10. By way of example only, Claim 1 recites one of the inventions disclosed in the '496 Patent:

1. A method of visually detecting a gas leak of any one or more chemicals of a group of predetermined chemicals, the gas leak emanating from a component of a group of components in different locations, the method comprising:
  - [1] aiming a passive infrared camera system towards the component, wherein the passive infrared camera system comprises:
    - [2] a lens,
    - [3] a refrigerated portion defined by the interior of a Dewar flask, the refrigerated portion comprising therein:
      - [4] a single filter configuration comprising at least one fixed optical bandpass filter, each filter fixed along an optical path between the lens and the infrared sensor device, wherein at least part of the aggregate pass band for the single filter configuration is within an absorption band for each of the predetermined

- chemicals and wherein the aggregate pass band for the single filter configuration is at least about 200 nm; and
- [5] a refrigeration system adapted to cool the refrigerated portion, the refrigeration system comprising a closed-cycle Stirling cryocooler;
- [6] filtering an infrared image associated with the area of the gas leak under normal operating and ambient conditions for the component with the at least one optical bandpass filter;
- [7] receiving the filtered infrared image of the gas leak with the infrared sensor device;
- [8] electronically processing the filtered infrared image received by the infrared sensor device to provide a visible image of the gas leak under variable ambient conditions of the area around the leak; and
- [9] visually detecting the leak based on the visible image under the variable ambient conditions.

**United States Patent No. 8,426,813 (“the ’813 Patent”)**

11. On April 23, 2013, United States Patent No. 8,426,813 (the “’813 Patent”), entitled “Chemical Leak Inspection System,” was duly and legally issued to inventor David W. Furry by the USPTO after a full and fair examination. The ’813 Patent is a continuation of the patent application that matured into the ’496 Patent.

12. LSI is the owner of the entire right, title, and interest in and to the ’813 Patent by assignment, and has the exclusive right to sue for infringement and recover damages for all past, present and future infringement, including against Defendant FLIR. The ’813 Patent is valid and enforceable. A true and correct copy of the ’813 Patent is attached as **Exhibit B**.

13. The ’813 Patent is generally directed to systems that can visually detect gas leaks emanating from various components typically found in petrochemical plants, pipelines, utility plants, and/or other industrial settings. The detection of chemical gas leaks is taught in the claimed inventions by a refrigerated infrared camera system, fitted with specific optical

bandpass filters within the infrared absorption band for the chemicals in question, that can create infrared images depicting the leak at any given source component. Thus, gas leaks can be detected when the infrared system processes the infrared image such that the leak can be visually seen.

14. By way of example only, Claim 1 recites one of the inventions disclosed in the '813 Patent:

1. A system for producing a visible image of a leak of any one or more chemicals of a group of chemicals, the leak emanating from a component, including:
  - [1] a passive infrared camera system including:
    - [2] a lens assembly including a lens;
    - [3] a refrigerated portion including an interior;
    - [4] an infrared sensor device located in the interior of the refrigerated portion;
    - [5] a single filter configuration located in the interior of the refrigerated portion and including an optical bandpass filter fixed along an optical path between the lens assembly and the infrared sensor device;
    - [6] a refrigeration system that can cool the interior of the refrigerated portion;
    - [7] wherein at least part of the pass band for the single filter configuration is within an absorption band for each of the chemicals; and
    - [8] wherein the aggregate pass band for the single filter configuration is at least about 100 nm; and
    - [9] a processor that can process a signal representing the filtered infrared image captured by the infrared sensor device to produce a visible image of the chemical emanating from the component under variable ambient conditions of the area around the leak.

### **FACTUAL BACKGROUND**

15. LSI refers to and incorporates herein the allegations of paragraphs 1 through 14.

16. In short, the patented technology allows effective, reliable gas leak detection with specially modified infrared camera systems for the petrochemical, oil and gas, utility, pipeline, and other commercial industries. Fundamentally, the detection of fugitive gas emissions is essential for both the efficient operation of industrial plants and pipelines and the effective stewardship for the health and safety of surrounding communities.

17. Every day, the innovations disclosed in the Patents-In-Suit are used for a wide variety of reasons, including for example, the chemical plant operator detecting chemical leaks to conduct preventative cost-saving repairs, the same operator using leak detection to avoid stiff fines for violating federal or state environmental regulations, or the companies contracted by operators to detect gas leaks for any of the reasons stated.<sup>1</sup> What these examples rely upon is improved gas leak detection by systems and methods that use filtered, refrigerated infrared camera technology to optically image particular chemicals.

18. Indeed, prior techniques in gas leak detection were time consuming and resulted in considerable labor costs. These prior systems include, without limitation, the use of an ionizer detector or electronic screener (commonly known as a “sniffer”) to survey pipelines and industrial plant components, such as valves, flanges, vessels, pipes, and other high-risk equipment components. Such a survey could take days or weeks, depending on the size and scope of the pipeline or processing plant in question, as teams of surveyors had to literally

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<sup>1</sup> See, e.g., Richard Harris, *Breathing Easier: How Houston is Working to Clean Up Its Air*, located at <http://www.npr.org/2013/05/30/185993899/breathing-easier-how-houston-is-working-to-clean-up-its-air> (last visited July 17, 2013), a true and correct copy is attached hereto as **Exhibit C**.

“walk the line” with their sniffer devices. The following image depicts a Thermo Scientific Toxic Vapor Analyzer “TVA” 1000-B, a typical “sniffer”:



19. More importantly, Leak Detection and Repair (“LDAR”) procedures, surveying, and the associated reporting, where gas leaks are prevalent in industrial settings, are mandatory under current Environmental Protection Agency (“EPA”) regulations. Although these prior gas detection methods are time consuming and expensive, they are specifically sanctioned under EPA guidelines as acceptable LDAR methods,<sup>2</sup> including the testing and reporting guidelines promulgated by statutory authority<sup>3</sup> and known as “Method 21” work practice procedures.<sup>4</sup>

20. At least by 2001, the EPA recognized the shortcomings of conventional leak detection methods and even proposed new alternative work practice procedures to allow for

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<sup>2</sup> LDAR is used to find fugitive gas emissions to effectively locate and repair leaks.

<sup>3</sup> See generally Clean Air Act, 42 U.S.C. §§ 7401-7671g (2013).

<sup>4</sup> See EPA Method 21 – Determination of Volatile Organic Compound Leaks, 40 C.F.R. Pt. 60, App A-7 (2013).

optical imaging of gas leaks under Method 21. But, the EPA never promulgated such guidelines in 2001 because at that time no optical method or system was developed that was both mobile and that could accurately detect gas leaks or fugitive emissions. The patented technology, however, does.

**David Furry Created Technologies that Allow for the Effective Detection of Gas Leaks for Operator Safety, Environmental Stewardship, and Cost Savings**

21. The story of the patented technology disclosed and claimed in the '496 and '813 Patents begins with the inventor, David Furry. Mr. Furry was the operations manager for the City of Brady, Texas, which owned a 42 mile hydrocarbon transmission line and several miles of gathering lines in Brown and McCulloch Counties, Texas. As part of his daily duties, Mr. Furry was responsible for the balance of pipeline volumes and detection of fugitive leaks if the system was un-balanced.

22. Moreover, Mr. Furry is well known in the LDAR and petrochemical industries and is the pioneer who developed improved leak detection methodologies, including the successful development of optical infrared gas imaging. A frequent speaker at industry and environmental conferences, Mr. Furry is well respected in the industry and within the ranks of various governmental agencies, including the EPA and the Texas Commission on Environmental Quality ("TCEQ").<sup>5</sup>

23. The genesis of Mr. Furry's inventions began when he realized that conventional LDAR methods were time consuming, required a considerable amount of labor, and more importantly, could not effectively find all fugitive gas emissions in an industrial setting. For

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<sup>5</sup> Formerly known as the Texas Natural Resource Conservation Commission ("TNRCC").



example, under Method 21 guidelines, plant operators are only required to survey certain process equipment known to be high risk components for gas leaks.<sup>6</sup>

24. Because of the time and expense to survey an entire plant or miles-long pipeline, vast portions do not get surveyed since they are not “mandatory” areas to be tested. This leads to greenhouse gas and fugitive chemical emissions that not only result in potential lost profit for the operator, but pose considerable health and safety hazards and environmental fines.<sup>7</sup> Mr. Furry was determined to find an alternative means to detect gas leaks, which was both efficient, cost effective, and would result in added benefit to both the operator and the community.

25. Around the early 1990’s, Mr. Furry set out to improve his leak surveys from the traditional “sniffer” techniques sanctioned under Method 21 guidelines by experimenting with infrared camera technology as a means to optically image gas leaks. Early attempts were unsuccessful until he experimented with infrared filters. Mr. Furry realized these filters could unlock his solution and set out to find a filter range that could image hydrocarbon gases by using the absorption properties of chemicals in the infrared light spectrum.

26. After much experimentation and countless resources spent with various infrared cameras he acquired on the market, on or around 1996, he was able to crudely see an out-of-focus image for propane gas. He found the propane gas infrared absorption waveband by putting a bottle of propane in his front yard and scanning through the spectrum with the experimental absorption filter until he saw an image of the gas. His experiments showed that the peak infrared absorption waveband for typical hydrocarbon gases is around 3.3 to 3.5

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<sup>6</sup> See Method 21 – Determination of Volatile Organic Compound Leaks, 40 C.F.R. pt. 60, App A-7 (2013).

<sup>7</sup> See, e.g., Exhibit C.

micrometers in the infrared light spectrum. For example, Figure 5 of the '496 and '813 Patents shows the typical absorption waveband or frequency of typical hydrocarbons:

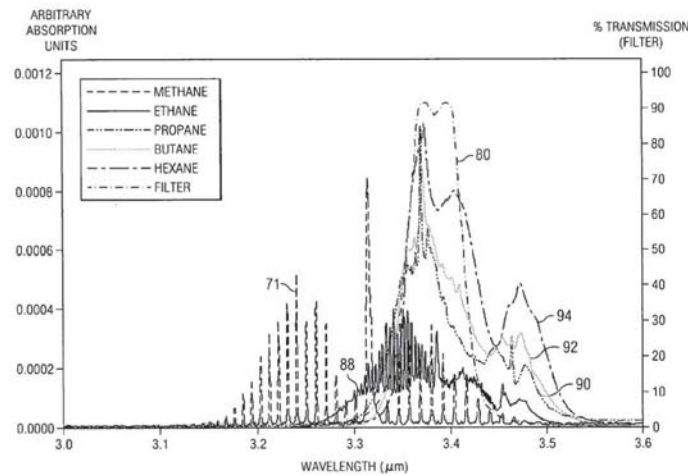


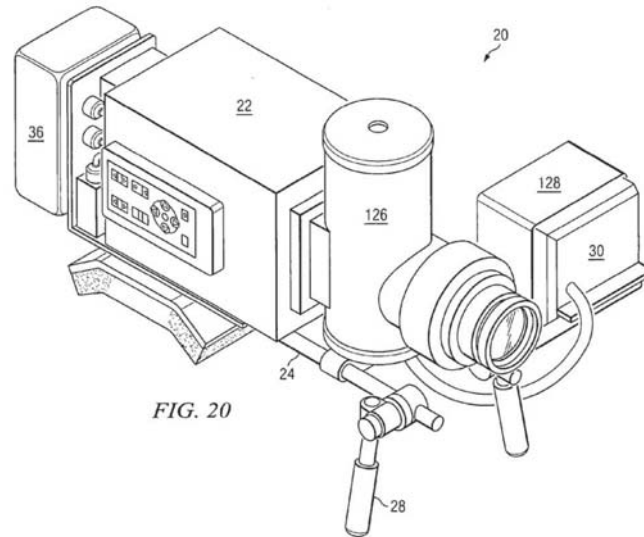
FIG. 5

27. He attributed the out-of-focus image as being a result of the type of equipment used during the experiment. After more experimentation to locate the absorption frequency of methane gas, he realized having the absorption filter on the outside of where the refrigerated infrared sensor was (“warm filter” configuration) would not be a viable solution because of the background “noise” associated with such a filter configuration.

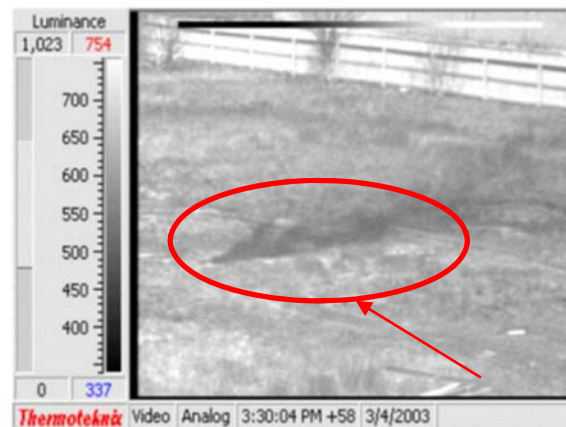
28. To get better resolution of the image, on or around 1996, Mr. Furry contacted several engineering research firms to build an infrared camera with a “cold filter” configuration (which places the absorption filter in the refrigerated portion of an infrared camera). But, he was unsuccessful in finding a suitable engineering firm to build such a camera at that time.

29. Thus, Mr. Furry continued, until about 2002, to experiment with various infrared cameras on the market using warm and cold filter configurations to find a suitable camera he could use to continue his numerous experiments. With knowledge gained from his previous experiments, Mr. Furry provided specifications for a cold filtered camera to an infrared camera manufacturer in California called Indigo Systems Corporation (“Indigo”). Indigo built an

experimental camera to Mr. Furry's specification using a liquid-nitrogen filled Indigo "Merlin" laboratory camera with a removable cold filter on or near February 2003, which is depicted as element [126] in Figure 20 of the '496 and '813 Patents below.



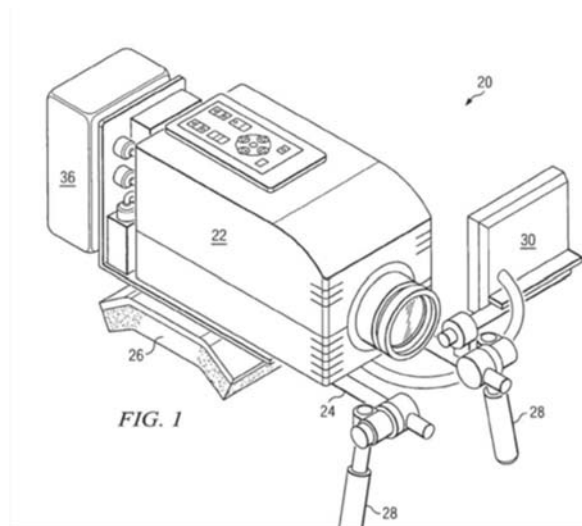
30. The configuration was a success after additional experimental testing in March 2003, and gas leaks were optically imaged in their infrared spectrum absorption band. The following image shows an underground pipeline leak detected by the modified Indigo camera:



31. Mr. Furry immediately filed his original provisional U.S. patent application (No. 60/477,994) on June 11, 2003, disclosing his cold filtered, infrared camera design to detect gas

leaks. Moreover, he filed a subsequent PCT application (No. PCT/US2004/012946) on April 26, 2004,<sup>8</sup> which is the parent patent application for both Patents-In-Suit and all of which claim priority to the original U.S. provisional application.

32. Due to the success of the Merlin lab camera, Mr. Furry ordered, to his specifications, the first modified Indigo commercial Merlin camera with a non-removable, built-in cold filter on or near May 2003. On or near late June 2003, Mr. Furry took possession of his first modified Merlin infrared camera. He subsequently used the modified camera, which he coined as the “Hawk Leak Detection System,” in his first paid, commercial trial in September 2003 and continuously experimented with the camera to obtain even better image resolutions, which is depicted in Figure 1 of the ’496 and ’813 Patents with a cold filter configuration inside element [22].



33. Throughout 2004, Mr. Furry began using his modified Indigo Merlin camera as part of his business and once the EPA was made aware of his new technology, he was invited to an American Petroleum Institute (“API”) and EPA-sanctioned trial to detect gas leaks using

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<sup>8</sup> The PCT application was published internationally on January 6, 2005 (WO 2005/001409), a true and correct copy is attached hereto as **Exhibit D**.

improved optical imaging technologies. Mr. Furry's design was hands-down the superior technology to any other optical imaging camera at the API / EPA trials. The following image shows an operator using the modified Indigo camera in a process plant:



34. Moreover, as a direct result of the demonstrated success, capabilities, and portability of Mr. Furry's innovations, the EPA promulgated voluntary alternative work place guidelines for Method 21 LDAR procedures that now include "Smart LDAR" procedures (that Mr. Furry helped to develop), which allow operators to use infrared optical imaging to monitor, survey, and detect fugitive gas emissions in compliance with EPA regulations.<sup>9</sup>

35. Due to his contributions to environmental stewardship attributed directly to the infrared camera systems he developed, Mr. Furry received many accolades and awards from the leak detection and repair community, including the EPA's 7th Annual Clean Air Excellence Award in 2007, where the EPA recognized that the technology disclosed in the

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<sup>9</sup> See Alternative Work Practice to Detect Leaks From Equipment, 71 Fed. Reg. 17,401 (April 6, 2006) (guidelines published for public comment, issued on December 22, 2008); 40 C.F.R. pt. 60) (2013) (EPA-HQ-OAR-2003-0199).

Patents-In-Suit “has the potential to save companies from lost revenue, damage, and fines while reducing the potential of unacceptable levels of human exposure to toxic substances, fires, explosions, and other serious problems.”<sup>10</sup> Mr. Furry also received the TCEQ’s award for Innovative Technology in 2007<sup>11</sup> and numerous accolades from members of the Texas Legislature and the U.S. Congress for his contributions to gas leak detection and environmental safety.<sup>12</sup>

36. Mr. Furry’s success with the new innovative technologies he developed is widely seen in the industry as a breakthrough in leak detection methods. As a result, Mr. Furry has consulted and continues to provide leak detection services to leading oil and gas companies such as ExxonMobil, Shell, BP, Conoco, Chevron, and continues to work closely with governmental agencies, including the TCEQ in the past for aerial surveys of hydrocarbon pipelines in the Northern District of Texas.

37. Mr. Furry assigned his then pending patent applications to Furry Brothers LLC (“Furry Brothers”) in December 2005, which was a company he created with his brother, Don Furry, to help market his designs in conjunction with Indigo. Furry Brothers subsequently assigned the then pending patent applications to Plaintiff LSI in December 2008 when Mr. Furry divested all his interest in Furry Brothers to devote his attention full-time to LSI, which was the entity he created in 2003 to conduct Smart LDAR surveys for various plant and pipeline operators throughout the world.

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<sup>10</sup> See <http://www.epa.gov/air/cleanairawards/winners-2006.html> (last visited July 17, 2013) (emphasis added), a true and correct copy is attached hereto as **Exhibit E**.

<sup>11</sup> See <http://www.teea.org/2007-winners> (last visited July 18, 2013), a true and correct copy attached hereto as **Exhibit F**.

<sup>12</sup> See April 25, May 2, and May 9, 2007 letters from various Texas state legislatures and Congressional members. True and correct copies are attached hereto as **Exhibits G, H, and I**.

**FLIR Offers Products to Customers Knowing That They Infringe the Patents-In-Suit**

38. Through various strategic acquisitions, FLIR makes, uses, sells and offers to sell refrigerated infrared gas detection systems. On January 6, 2004, FLIR acquired Indigo for approximately \$165 million<sup>13</sup> and, on information and belief, merged the Indigo infrared product line, including the Merlin line, into FLIR's then existing infrared product offerings.

39. Because of the FLIR acquisition of Indigo, Furry Brothers was unable to finalize any commercial deal in 2004 with Indigo to market the designs Mr. Furry developed. Instead, Furry Brothers and FLIR explored a possible business relationship with each other to successfully market the gas imaging cameras in 2005.

40. Furry Brothers negotiated with FLIR several business development agreements in 2005 and 2006 to continue the relationship it had developed with Indigo, which previously helped to reduce to practice Mr. Furry's inventions into the Merlin embodiment. FLIR hoped to utilize the Furry Brother's expertise with the technology, knowledge, and contact base in the LDAR community to increase market share on the now proven technology. In exchange, FLIR agreed to provide commissions to Furry Brothers on sales of modified gas detection infrared cameras.

41. On information and belief, in 2005, FLIR subsequently marketed its new "gas detection" offerings as the "ThermaCAM® GasFindIR™" series of cameras and incorporated Mr. Furry's specifications and know-how into an existing FLIR product line. The following image is an example of the FLIR ThermaCAM® GasFindIR™ series camera:

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<sup>13</sup> See January 6, 2004 SEC Form 8-K, FLIR Systems, Inc., a true and correct copy is attached hereto as **Exhibit J**.



42. At least by the execution date of the first business development agreement with Furry Brothers in July 2005, and on information and belief at an earlier time, FLIR was made aware and had actual knowledge that Mr. Furry had filed PCT and U.S. patent applications, which were still pending before the USPTO and were embodied in the modified Indigo Merlin and the FLIR ThermoCAM® GasFindIR™ cameras.

43. Moreover, on information and belief, FLIR is the assignee of the following U.S. patent applications wherein one or more LSI patent applications, including those that matured into the Patents-In-Suit, were a basis of claims rejection by the patent examiner and cited as prior art by FLIR:

APPLICATION NO.	FILE DATE	STATUS
11/239,531	September 29, 2005	Abandoned
11/403,534	April 12, 2006	Abandoned
11/683,943	March 8, 2007	U.S. Patent No. 7,851,758
12/069,482	February 11, 2008	U.S. Patent No. 7,649,174
12/966,951	December 13, 2010	U.S. Patent No. 8,242,445

44. Notwithstanding, Furry Brothers and FLIR terminated their business development agreements in 2008 after several disagreements regarding the payment of sales commissions



and performance of the agreements' terms arose between the parties. Subsequent commercial litigation between the parties commenced in October 2008 in the case styled *Furry Brothers, LLC v. FLIR Systems, Inc.*, Civil Action No. 4:08-CV-02103-H, in the Southern District of Texas, Houston Division. The underlying causes of action were the performance and alleged breaches of the business development agreements between the parties.

45. On information and belief, at least by the time the litigation between Furry Brothers and FLIR was settled and dismissed in March 2009, FLIR was made aware that all pending PCT and U.S. patent applications were assigned by Furry Brothers to LSI in December 2008. FLIR does not have any rights, contractual or otherwise, to any of LSI's patent applications, including those applications that would later mature into the Patents-In-Suit.

46. Further, on information and belief, FLIR re-branded its infrared optical gas detection cameras into the "GF" series cameras, which retail as high as \$100,000.00 per camera, including the additional accessories FLIR specifically sells with its products. The following image is an example of the FLIR GF series camera:



47. Moreover, on information and belief, FLIR promotes the use of its gas detection infrared cameras by offering training courses through FLIR's Infrared Training Center ("ITC")

to customers and operators of its products, including certifying customers on the use and operation of FLIR gas imaging detection cameras.<sup>14</sup>

48. Several of FLIR's products – including current products and legacy products from acquisitions, including the FLIR ThermaCAM® GasFindIR™ and FLIR GF series infrared cameras – infringe one or more claims of the '496 and '813 Patents when such FLIR systems and methods are made, used, offered for sale or sold in the United States.

**FLIR Promotes the Patented Technology as a Means for Considerable Cost Savings for Operators**

49. On information and belief, FLIR touts that, “The use of infrared cameras has already become a standard practice in many oil and gas companies. It’s a proactive way to identify sources of Volatile Organic Compound (VOC) emissions and repair leaking components before it’s too late. *By using the most advanced VOC detection, you will improve safety and productivity and minimize emissions.*”<sup>15</sup>

50. On information and belief, operators and customers utilizing FLIR's optical gas imaging cameras practice methods and use systems disclosed in the Patents-In-Suit. Moreover, on information and belief, governmental and third-party studies demonstrate that effective use of infrared camera technology and optical imaging incorporating the technologies embodied in the Patents-In-Suit can potentially save operators hundreds of millions of dollars annually in

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<sup>14</sup> See <http://courses.infraredtraining.com/index.cfm?action=registration.schedule&courseId=3> (last visited July 10, 2013), a true and correct copy is attached hereto as **Exhibit K**.

<sup>15</sup> See <http://www.flir.com/thermography/americas/us/view/?id=49559> (last visited July 18, 2013) (emphasis added), a true and correct copy is attached hereto as **Exhibit L**.

the recovery of lost product<sup>16</sup> and operators are eager to adopt these technologies to achieve a “competitive advantage” in cost savings.<sup>17</sup>

## COUNT I

### **Infringement of U.S. Patent No. 8,193,496**

51. LSI refers to and incorporates herein the allegations of paragraphs 1 through 50.

52. FLIR has directly infringed and continues to directly infringe, either literally or under the doctrine of equivalents, one or more claims of the '496 Patent by making, using, selling, and/or offering to sell in the United States certain methods and/or systems disclosed and claimed in the '496 Patent. In particular, at least the following current and legacy FLIR gas detection infrared camera systems directly infringe LSI's '496 Patent:

- FLIR ThermaCAM® GasFindIR™
- FLIR ThermaCAM® GasFindIR™ HSX
- FLIR ThermaCAM® GasFindIR™ LW
- FLIR ThermaCAM® GasFindIR™ CO
- FLIR GF300
- FLIR GF320
- FLIR GF304
- FLIR GF306
- FLIR GF309
- FLIR GF346

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<sup>16</sup> See Vignesh Gowrishankar, Ph.D et al., *Leaking Profits: The U.S. Oil and Gas Industry Can Reduce Pollution, Conserve Resources, and Make Money by Preventing Methane Waste*, Natural Resources Defense Council (March 2012), a true and correct copy attached hereto as **Exhibit M**.

<sup>17</sup> See Exhibit C.

53. FLIR is thus liable for direct infringement of the '496 Patent pursuant to 35 U.S.C. § 271(a).

54. In addition to and/or in the alternative to direct infringement, FLIR has also induced and contributed and continues to induce and contribute to its customers' direct infringement of the '496 Patent by selling, making and/or configuring infrared camera systems and/or methods that embody the patented inventions or components thereof claimed in the '496 Patent.

55. In particular, on information and belief, FLIR actively, knowingly and intentionally induces its customers to infringe the patented inventions claimed in the '496 Patent by, among other things, providing technical support, documentation, training, and software, and instructing and/or assisting its customers to combine FLIR components with other components and computer-based hardware to make and/or use infringing computer-based applications, systems, and methods; and by instructing and/or assisting its customers on how to use FLIR's infringing infrared camera systems and methods. A significant portion of such technical support, custom demonstrations, and documentation is readily accessed and publicly available through FLIR's website,<sup>18</sup> product literature,<sup>19</sup> or through FLIR sanctioned training via FLIR's ITC training institute.<sup>20</sup> Upon information and belief, FLIR provides additional non-public technical support and documentation to its customers.

56. Since at least the date this lawsuit was filed, and on information and belief at an earlier time, FLIR has known that its systems and components are used by its customers in an

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<sup>18</sup> See <http://www.flir.com/thermography/americas/us/view/?id=49558> (last visited July 18, 2013), a true and correct copy is attached hereto as **Exhibit N**.

<sup>19</sup> See, e.g., Thermal Imaging Cameras for Optical Gas Imaging (OGI) and Furnace Inspections, FLIR Systems, Inc. (April 2012), a true and correct copy is attached hereto as **Exhibit O**.

<sup>20</sup> See Exhibit K.

infringing manner and/or has been and continues to be willfully blind to such infringing use and has acted with the specific intent to encourage and facilitate such infringing use. FLIR is thus liable for inducing its customers to infringe the '496 Patent pursuant to 35 U.S.C. § 271(b).

57. Furthermore, on information and belief, FLIR offers to sell and sells (directly or through intermediaries or authorized agents under FLIR's control) to customers and potential customers in this Judicial District and elsewhere in the United States, component parts of LSI's patent inventions, including, without limitation, software applications, hardware components, and/or technical support. On information and belief, FLIR's components are designed to be used with and connected to other interoperable components, which are further intended to enable FLIR's customers to make and use systems and methods that infringe the '496 Patent. FLIR's components are specifically adapted for use in applications, systems, and methods that infringe the '496 Patent, and such components constitute material aspects of infringing applications that are not staple articles or commodities of commerce suitable for substantial non-infringing uses, all of which is known to FLIR. Since at least the time of this lawsuit, and on information and belief at an earlier time, FLIR has known that its customers have used and continue to use FLIR's components in a manner that directly infringes the '496 Patent, and/or has been and continues to be willfully blind to its customers' infringing use. FLIR is thus liable for contributory infringement of the '496 Patent pursuant to 35 U.S.C. § 271(c).

58. In addition, on information and belief, FLIR has infringed and is infringing the '496 Patent with knowledge of LSI's patent rights, at least from the time of the filing of the present lawsuit, and on information and belief at an earlier time, with knowledge that FLIR's

accused products infringe the '496 Patent. FLIR's acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LSI's patent rights.

59. LSI has suffered and continues to suffer damages as a result of FLIR's direct and indirect infringement of the '496 Patent. Pursuant to 35 U.S.C. § 284, LSI is entitled to recover damages from FLIR for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. Moreover, LSI is also entitled to recover damages sustained by FLIR's indirect infringement of the '496 Patent, including without limitation, damages attributable to the use of the patented features by FLIR customers' direct infringement resulting, in part, in significant cost savings in lost product recovery by gas leak detection and repair. LSI is further entitled to enhanced damages for FLIR's acts of willful patent infringement pursuant to 35 U.S.C. § 284.

60. FLIR's infringement of the '496 Patent has damaged and will continue to damage LSI, causing irreparable harm for which there is no adequate remedy at law, unless FLIR is enjoined by this Court.

61. Pursuant to 35 U.S.C. § 287, LSI has complied with all marking requirements for the '496 Patent.

## COUNT II

### **Infringement of U.S. Patent No. 8,426,813**

62. LSI refers to and incorporates herein the allegations of paragraphs 1 through 61.

63. FLIR has directly infringed and continues to directly infringe, either literally or under the doctrine of equivalents, one or more claims of the '813 Patent by making, using, selling, and/or offering to sell in the United States certain methods and/or systems disclosed and claimed in the '813 Patent. In particular, at least the following current and legacy FLIR gas detection infrared camera systems directly infringe LSI's '813 Patent:

- FLIR ThermaCAM® GasFindIR™
- FLIR ThermaCAM® GasFindIR™ HSX
- FLIR ThermaCAM® GasFindIR™ LW
- FLIR ThermaCAM® GasFindIR™ CO
- FLIR GF300
- FLIR GF320
- FLIR GF304
- FLIR GF306
- FLIR GF309
- FLIR GF346

64. FLIR is thus liable for direct infringement of the '813 Patent pursuant to 35 U.S.C. § 271(a).

65. In addition to and/or in the alternative to direct infringement, FLIR has induced and contributed and continues to induce and contribute to its customers' direct infringement of the '813 Patent by selling, making and/or configuring infrared camera systems and/or methods that embody the patented inventions or components thereof claimed in the '813 Patent.

66. In particular, on information and belief, FLIR actively, knowingly and intentionally induces its customers to infringe the patented inventions claimed in the '813 Patent by, among other things, providing technical support, documentation, training, and software, and instructing and/or assisting its customers to combine FLIR components with other components and computer-based hardware to make and/or use infringing computer-based applications, systems, and methods; and by instructing and/or assisting its customers on how to use FLIR's infringing infrared camera systems and methods. A significant portion of such

technical support, custom demonstrations, and documentation is readily accessed and publicly available through FLIR's website,<sup>21</sup> product literature,<sup>22</sup> or through FLIR sanctioned training via FLIR's ITC training institute.<sup>23</sup> Upon information and belief, FLIR provides additional non-public technical support and documentation to its customers.

67. Since at least the date this lawsuit was filed, and on information and belief at an earlier time, FLIR has known that its systems and components are used by its customers in an infringing manner and/or has been and continues to be willfully blind to such infringing use and has acted with the specific intent to encourage and facilitate such infringing use. FLIR is thus liable for inducing its customers to infringe the '813 Patent pursuant to 35 U.S.C. § 271(b).

68. Furthermore, on information and belief, FLIR offers to sell and sells (directly or through intermediaries or authorized agents under FLIR's control) to customers and potential customers in this Judicial District and elsewhere in the United States, component parts of LSI's patent inventions, including, without limitation, software applications, hardware components, and/or technical support. On information and belief, FLIR's components are designed to be used with and connected to other interoperable components, which are further intended to enable FLIR's customers to make and use systems and methods that infringe the '813 Patent. FLIR's components are specifically adapted for use in applications, systems, and methods that infringe the '813 Patent, and such components constitute material aspects of infringing applications that are not staple articles or commodities of commerce suitable for substantial non-infringing uses, all of which is known to FLIR. Since at least the time of this lawsuit, and

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<sup>21</sup> See Exhibit N.

<sup>22</sup> See, e.g., Exhibit O.

<sup>23</sup> See Exhibit K.



on information and belief at an earlier time, FLIR has known that its customers have used and continue to use FLIR's components in a manner that directly infringes the '813 Patent, and/or has been and continues to be willfully blind to its customers' infringing use. FLIR is thus liable for contributory infringement of the '813 Patent pursuant to 35 U.S.C. § 271(c).

69. In addition, on information and belief, FLIR has infringed and is infringing the '813 Patent with knowledge of LSI's patent rights at least from the time of the filing of the present lawsuit, and on information and belief an earlier time, with knowledge that FLIR's accused products infringe the '813 Patent. FLIR's acts of infringement have been and continue to be willful, deliberate, and in reckless disregard of LSI's patent rights.

70. LSI has suffered and continues to suffer damages as a result of FLIR's direct and indirect infringement of the '813 Patent. Pursuant to 35 U.S.C. § 284, LSI is entitled to recover damages from FLIR for its infringing acts in an amount subject to proof at trial, but no less than a reasonable royalty. Moreover, LSI is also entitled to recover damages sustained by FLIR's indirect infringement of the '813 Patent, including without limitation, damages attributable to the use of the patented features by FLIR customers' direct infringement resulting, in part, in significant cost savings in lost product recovery by gas leak detection and repair. LSI is further entitled to enhanced damages for FLIR's acts of willful patent infringement pursuant to 35 U.S.C. § 284.

71. FLIR's infringement of the '813 Patent has damaged and will continue to damage LSI, causing irreparable harm for which there is no adequate remedy at law, unless FLIR is enjoined by this Court.

72. Pursuant to 35 U.S.C. § 287, LSI has complied with all marking requirements for the '813 Patent.

**JURY DEMAND**

73. LSI hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

74. Plaintiff LSI respectfully requests this Court to enter judgment in its favor against Defendant FLIR, granting the following relief:

- A. Judgments in LSI's favor on Counts I and II;
- B. Judgment in LSI's favor that Defendant has infringed and continues to infringe the '496 Patent;
- C. Judgment in LSI's favor that Defendant has infringed and continues to infringe the '813 Patent;
- D. An award to LSI of damages adequate to compensate them for Defendant's acts of patent infringement, both directly and/or indirectly, but in no event less than a reasonable royalty, together with interest and costs as fixed by the Court pursuant to 35 U.S.C. § 284;
- E. An award to LSI of enhanced damages, up to and including treble damages, pursuant to 35 U.S.C. § 284, for FLIR's acts of willful patent infringement of both the '496 and '813 Patents;
- F. A grant of permanent injunction, pursuant to 35 U.S.C. § 283, against FLIR, enjoining FLIR from further acts of patent infringement and requiring notification to any FLIR customers of such injunction;
- G. An award to LSI of its costs of suit and reasonable attorneys' fees, pursuant to 35 U.S.C. § 285, due to the exceptional nature of this case;
- H. Any further relief that this Court deems just and proper.

Date: July 25, 2013

Respectfully Submitted:

/s/ Rajkumar Vinnakota

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